# MEET
# HOTSPOT

DATASHEET

# THE HELIUM MOBILE NETWORK.

The Helium Mobile Network represents a new approach to building a wireless network that enables individuals to deploy transformative mobile equipment and have an opportunity to earn MOBILE rewards.

Introducing a revolutionary piece of hardware — the Helium Mobile Hotspot.

# WHAT ARE HOTSPOTS?

The Helium Mobile Hotspot is now available in both indoor and outdoor versions. These all-in-one devices offer users the simplest, most cost-effective way to build Helium Mobile Network coverage and earn MOBILE rewards.

With PoE support, builders have the flexibility of single-cable connection and can onboard with the Helium Mobile Builder app to start providing coverage leveraging Wi-Fi technology.

## Mobile™

# HOTSPOT

Helium Mobile Hotspot makes it possible for anyone to provide mobile coverage for high-foot traffic indoor locations such as: retail, food and beverage, workspaces, and others. No professional installers needed.

The simplicity of this all-in-one device means anyone can participate to build the Helium Mobile Network and deliver more indoor coverage for Helium Mobile users.

![Mobile™]

# HOTSPOT OUTDOOR

The outdoor version reduces technical complexity and start-up costs so Helium community builders can expand their efforts into outdoor settings.

The IP67-rated weatherproof design enables builders to provide seamless connectivity in outdoor spaces without worrying about harsh weather conditions.

# COMPARISON

With both indoor and outdoor versions of the Helium Mobile Hotspot offering a simple and economical way to build the Helium Mobile Network, reference the table below to see which version makes the most sense for your next deployment location.

For more detailed information check the technical specifications section on the following pages.

| | Indoor | Outdoor |
|---|---|---|
| Protection Rating | IP30 = Indoor-use only | IP67 = Highly suitable for outdoor environments, safeguarded against dust, rain, and snow. |
| Mounting Options | Ceiling mount | Pole mount |
| Preferred Locations | Retail & Shopping, Food & Beverage Establishments, Accommodations, Workspaces, (see 'Deployment Locations' section) | Outdoor shopping districts, and street markets, sports facilities and stadiums parks, public squares, etc (see 'Deployment Locations' section) |
| Antenna | Omnidirectional | Directional: 120° horizontal 60° vertical |
| Range | Up to 150 feet indoors and approximately 3305 square feet | Up to 800 ft with line of sight |
| Availability | US Nationwide | |
| Power over Ethernet | Supported | |
| Backhaul and recommended minimum speed | Ethernet - 120 Mbps downlink & 12 Mbps uplink | |
| Wi-Fi Technology | Wi-Fi 6 | |

# FEATURES

**Wi-Fi 6** Delivers seamless Helium Mobile Network coverage using Wi-Fi 6 technology.

**Deployment Flexibility** All-in-one form factor allows for quick and simple deployment.

**Remote Management** Users can manage multiple devices using the Helium Mobile Hotspot Dashboard.

**Helium Mobile Builder App** Purpose-built app for quick onboarding and monitoring of hotspot status.

# LOCATIONS

Deploy hotspots in high-foot traffic indoor and outdoor areas.

Examples include:

| Indoor | Outdoor |
| --- | --- |
| Shopping Malls, Supermarkets, and Grocery Stores | Outdoor Shopping Districts and Street Markets |
| Restaurants, Eateries, Cafes, and Coffee Shops | Sports Facilities and Stadiums |
| Hotels and Lodges | Tourist Attractions and Historical Sites |
| Fitness Centers and Gyms | Public Parks and Gardens |
| Salons and Spas | Outdoor Concert Venues and Festivals |
| Public Libraries, University, and College Buildings | Public Squares and Pedestrian Streets |
| Office Buildings and Co-working Spaces | University and College Campuses |
| Transport Hubs (bus terminals, train stations, airport lounges) | Outdoor Transport Hubs |

# SPECIFICATIONS

## OPERATING FREQUENCIES

2.4 GHz 802.11b/g/n/ax
5 GHz 802.11a/n/ac/ax

Supported frequency bands:
- 2.412-2.484 GHz
- 5.150-5.250 GHz (UNII-1)
- 5.250-5.350 GHZ (UNII-2)
- 5.470-5.600, 5.660-5.725 GHz (UNII-2e)
- 5.725 -5.825 GHz (UNII-3)

## CAPABILITIES

- 20 and 40 MHz channels (802.11n), 20, 40, and 80 MHz channels (802.11ac/ax)
- Supports 2x2/ 40MHz Wi-Fi (802.11b/g/n/ac/ax), up to 574Mbps link rate
- Supports 5G 2x2/ 80MHz Wi-Fi(802.11a/n/ac/ax), up to 1.2Gbps link rate

Max transmit power:
2.4G: Up to 22dBm
5G: Up to 22dBm

## ANTENNA (BUILT-IN)

- 2,400—2,500MHz (Vertical/Horizontal Polarization, ≥3dBi Gain)
- 4,940—5,850MHz (Vertical/Horizontal Polarization, ≥3dBi Gain)

## INTERFACES

- 1 x Gigabit Ethernet WAN with 802.3 at PoE(PD)
- 1 x DC Jack, supports 12V@1A power supply
- 1 x Reset Button

## POWER

- Power over Ethernet: 50V ~ 57V, 802.3 at PSE
- Alternative: 12V DC@1A
- Power consumption: 12W max
- Power over Ethernet injector sold separately

## ENVIRONMENT

- Temperature Operation: -10°C~+45°C
- Temperature Storage: -40°C~+70°C
- Operating Humidity 5%~95% (non-condensing)
- Elevations 86kPa~106kPa altitude
- IP30

158MM

158MM

28MM

**PHYSICAL DIMENSION AND WEIGHT**
Dimension: (W x D x H) 158mm × 158mm × 28mm
Weight: 454g

**LED INDICATORS**
4 x LED (PWR / WAN / 2.4G / 5G)

**SAFETY**
- NRTL Listed 62368-1 (US & CA)
- CB with IEC/EN 62368-1 (Basic safety certificate for worldwide marketing)
- FCC
- ETL
- WEEE 2002/96/EC recyclable materials requirements
- Prop65

**IN THE BOX**
- Helium Mobile Hotspot
- Ceiling, Desktop Mount, and Screw Kit
- Warranty and Legal Information Pamphlet
- Ethernet Cable
- Power Supply

# SPECIFICATIONS

## OPERATING FREQUENCIES

2.4 GHz 802.11b/g/n/ax
5 GHz 802.11a/n/ac/ax

Supported frequency bands:

- 2.412-2.484 GHz
- 5.150-5.250 GHz (UNII-1)
- 5.250-5.350 GHZ (UNII-2)
- 5.470-5.600, 5.660-5.725 GHz (UNII-2e)
- 5.725 -5.825 GHz (UNII-3)

## CAPABILITIES

- 20 and 40 MHz channels (802.11n), 20, 40, and 80 MHz channels (802.11ac/ax)
- Supports 2x2/ 40MHz Wi-Fi (802.11b/g/ n/ ac/ax), up to 574Mbps link rate
- Supports 5G 2x2/ 80MHz Wi-Fi (802.11a/ n/ac/ax), up to 1.2Gbps link rate

1,774 Gbps aggregated data rates

Max transmit power:
2.4G: Up to 24dBm
5G: Up to 24dBm

## ANTENNA (BUILT-IN)

2400~2500MHz
- Polarization: Vertical/Horizontal
- Peak Gain: 8dBi
- Efficiency (Avg.): >70%
- Return Loss: 10dB
- Isolation: 20dB
- H-Beam Width: 120°
- V-Beam Width: 60°

5150~5850MHz
- Polarization: Vertical/Horizontal
- Peak Gain: 9dBi
- Efficiency (Avg.): >75%
- Return Loss: 10dB
- Isolation: 20dB
- H-Beam Width: 120°
- V-Beam Width: 60°

## POWER

- Power over Ethernet: 50V ~ 57V, 802.3 at PoE (PD)
- Power consumption: 20W max
- Power over Ethernet injector sold separately

## INTERFACES

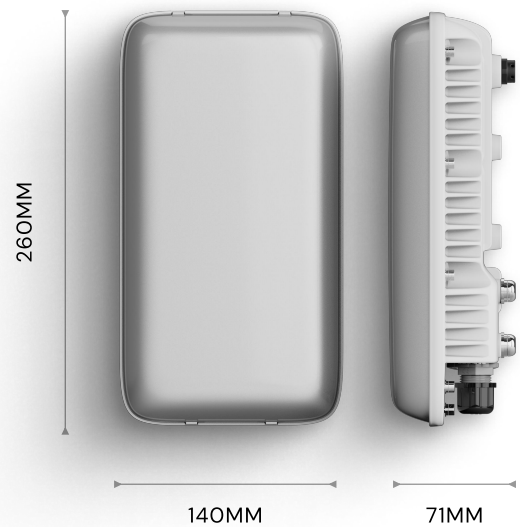- 1 x 2.5GE WAN with 802.3 at PoE(PD)
- 1 x Reset button

# SPECIFICATIONS

260MM

140MM

71MM

### ENVIRONMENT

- Temperature Operation: -40°C to +65°C
- Temperature Storage: -40°C~+85°C
- Operating Humidity: 5%~95% (non-condensing)
- Elevations: 86kPa~106kPa altitude
- IP67

### PHYSICAL DIMENSION AND WEIGHT

Dimension: (W x D x H) 260mm × 140mm × 71mm
Weight: 1,500g

### LED INDICATORS

1 x RBG LED (disabled)

### SAFETY

- NRTL Listed 62368-1 (US & CA)
- CB with IEC/EN 62368-1 IEC 60950-22 (Basic safety certificate for worldwide marketing)
- GB 9254 -2008(Class B of Product) EN55032 , EN55035, EN61000-4-3
- Level 4; EN61000-4-2, FCC Part 15B
- FCC
- WEEE 2002/96/EC recyclable materials requirements
- Prop65

### IN THE BOX

- Helium Mobile Hotspot Outdoor
- Pole mount, and screw kit
- Warranty And Legal Information Pamphlet

# FAQ

### Can I deploy the Helium Mobile Hotspot in my home?

The Helium Mobile Hotspot is designed for public, high foot traffic areas like coffee shops, small businesses, etc. It is not intended to be deployed in homes or residential areas.

### Will this device also provide normal Wi-Fi coverage? Coverage for sensors connected to the Helium IoT Network?

The Helium Mobile Hotspot uses Wi-Fi technology to provide coverage for Helium Mobile subscribers and doesn't replace your Wi-Fi router or access point for other Wi-Fi devices or provide coverage for devices on the Helium IoT network.

### Is Nova Labs distributing the tokens to my Helium Mobile Hotspot?

No. Nova Labs does not distribute tokens to hotspot deployers. The open source Helium Network protocol distributes tokens based on how the community votes. See HIP 93 for more information regarding how hotspots are rewarded.

### Is the Helium Mobile Hotspot similar to traditional cellular mobile hotspots?

Traditional mobile hotspots are primarily used to share your cellular service with other devices. The Helium Mobile Hotspot is a different product that helps extend mobile wireless coverage for Helium Mobile subscribers.